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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

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INVENTOR(S)

Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)
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☑ *Additional inventors are being named on the* 1 *separately numbered sheets attached hereto*

TITLE OF THE INVENTION (280 characters max)

WORD GAME HELPER

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ENCLOSED APPLICATION PARTS *(check all that apply)*

☑ Specification *Number of Pages* 9

☑ Drawing(s) *Number of Sheets* 1

☐ Application Data Sheet. See 37 CFR 1.76

☐ CD(s), Number

☑ Other (specify) Certificate of Express Mail

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Respectfully submitted,

SIGNATURE _____

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Date 3 / 8 / 04

REGISTRATION NO. *(if appropriate)* 53,154

Docket Number: 67,173-001

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67,173-001

UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: Dowe, Robert
Serial No.
Filed: Herewith
For: WORD GAME HELPER

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WORD GAME HELPER

BACKGROUND OF THE INVENTION

[0001] This invention relates to crossword puzzles and, more particularly, to a crossword puzzle grid having symmetric patterns and a coordinate system to facilitate solving or composing of a crossword puzzle.

[0002] Standard American crossword puzzles include a grid and a set of clues. The grid may vary in size, usually 9x9 squares up to 25x25 squares. The difficulty of the crossword puzzle typically increases with increasing number of squares. The grid includes some numbered squares to help a puzzle-solver enter answers to the clues on the grid and some black squares, which further aid the puzzle-solver.

[0003] Standard American crossword puzzles also include certain characteristic features such as the number of squares, the percentage of black squares, the degrees of interconnection of the answers, and the symmetry of the black squares. In particular, the black squares and answer squares exhibit a diagonal symmetry within the grid. That is, black squares located in the upper left quadrant have mirror black squares in the lower right quadrant. The mirror plane cuts diagonally between the upper left quadrant and lower right quadrant. Likewise, black squares in the upper right quadrant have mirror black squares in the lower left quadrant with another mirror plane cutting diagonally between the upper right and lower left quadrants. Despite the difficulty and complexity of even the larger size standard American grid crossword puzzles, some accomplished puzzle-solvers seek even more difficult crossword puzzles.

[0004] One more difficult variation of the standard American crossword puzzle utilizes a "diagramless" grid. The diagramless grid does not include numbered squares or black squares to aid the puzzle-solver. Instead, the puzzle-solver uses the clues not only to determine the answers but also to determine the number of squares required for the answer,

the location of the answer, and the location of black squares. Generally, the puzzle-solver begins at the top left of the grid and fills in the first across answer left to right. Once the first answer is filled in, the puzzle-solver fills in one black square to the right of the answer because there are no immediately consecutive answers. The puzzle solver also fills in the corresponding diagonally symmetrical mirror black square, which allows the puzzle-solver to fill in the answer for the last across clue. The puzzle-solver continues to fill in the grid in this manner, working from the outside of the grid inwards to the middle.

[0005] The diagramless crossword puzzle is considerably more difficult and complex than the standard American puzzle. For one, much trial and error is involved in successfully solving a diagramless puzzle. In the above example, the puzzle-solver filled in one black square to the right of the first across answer. However, after completing the second and third across answers the puzzle-solver may determine that there must be an additional black square after the first across answer in order to allow the answers to appropriately fit in the top row of the grid. In that case, the puzzle-solver must erase his answers and replace them with the ones he thinks are correct. The diagonal symmetry adds even more complexity to this solving process. Especially with large size grids, it may be difficult and confusing to visualize the locations of corresponding symmetrical answer locations and black squares.

[0006] The art of crossword puzzles includes not only solving, but composing as well, and the creative activity of composing a standard American crossword puzzle involves many of the same problems, which occur in solving a diagramless puzzle. The composer begins with a blank grid, and strives to create what those skilled in the art know as a "valid solution." The composer is concerned with the selection of answer words and clue definitions, and the placement of the answer words and black squares on the grid, following the accepted rules of answer word length, word interlock, percentage of black squares, and diagonal symmetry. This is very much a trial and error process, and the crossword puzzle

composer must also be able to visualize the locations of corresponding symmetrical answer word locations and black squares. Especially with large size grids, it may be difficult and confusing for the puzzle composer to visualize the locations of corresponding symmetrical answer locations and black squares.

[0007] Accordingly, it is desirable to provide a crossword puzzle grid utilizing symmetric patterns and a coordinate system to facilitate solving or composing a crossword puzzle.

BRIEF DESCRIPTION OF THE DRAWING

[0008] The various features and advantages of this invention will become apparent to those skilled in the art from the following detailed description of the currently preferred embodiment. The drawing that accompanies the detailed description can be briefly described as follows.

[0009] Figure 1 illustrates a grid having symmetric patterns and a coordinate system.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0010] Figure 1 illustrates a blank crossword puzzle grid 20. In this example, the grid 20 size is 15x15 squares, but it should be understood other sizes including but not limited to 9x9 to 25x25 squares will also benefit from the invention. The vertical column coordinate "8" 22 defines a central vertical axis 24 and the horizontal row coordinate "h" 23 defines a central horizontal axis 26. Together the vertical axis 24 and horizontal axis 26 define four quadrants of the grid, quadrant I, quadrant II, quadrant III, and quadrant IV. A color key 28 is included with the grid 20 to distinguish color for a black and white version of the grid 20, although in full color examples the color key 28 is not needed.

[0011] Each square 36 of the grid is colored. The selected colors of each of the grid squares 36 have been chosen to form geometric patterns. The geometric colored patterns include crosses 38 having a first color, say white, and crosses 40 of a second color, say gray. Each cross 38, 40 includes five squares. There are also boxes 42 of a third color, say blue, boxes 44 of a forth color, say green, boxes 46 of a fifth color, say yellow, and boxes 48 of a sixth color, say red. Each box 42, 44, 46, 48 includes four squares configured into a larger square. The perimeter 50 of the grid includes rectangles 52 of the third color, rectangles 54 of the fifth color, rectangles 56 of the forth color, and rectangles 58 of the sixth color. Each rectangle 52, 54, 56, 58 includes two side-by-side squares. The corners of the grid 20 include a single colored square. Quadrant I and quadrant IV have single squares 60 of the sixth color and quadrant II and quadrant III have single squares 61 of the fifth color. It is to be understood that other colors and other patterns could be used in the grid 20.

[0012] The arrangement of the geometric patterns in the grid 20 exhibits diagonal symmetry. That is, the geometric patterns found in a particular location in quadrant I have a mirror geometric pattern in quadrant IV across a first mirror plane 62. Likewise, geometric patterns in quadrant II have mirror geometric patterns in quadrant III but across a second mirror plane 63. It should be understood that other symmetries among the quadrants and other mirror planes could be used.

[0013] The location of a particular square 64 and its mirror square 66 is determined using a diagonally symmetric coordinate system. The diagonally symmetric coordinate system includes a first numbered row 68 along the top of grid 20, as part of a coordinate system for quadrant I and quadrant II, a second numbered row 72 along the bottom of grid 20 as part of a coordinate system for quadrant III and quadrant IV, a first lettered row 70 along the left side of the grid 20 as part of a coordinate system for quadrant I

and quadrant III, and a second lettered row 74 along the right side of grid 20 as part of a coordinate system for quadrant II and quadrant IV.

[0014] The first numbered row 68 includes sequential numbers one through fifteen. The second numbered row 72 includes sequential numbers fifteen through one. The first lettered row 70 includes sequential letters "a" through "o." The second lettered row 74 includes sequential letters "o" through "a." It is to be understood that different numbers or letters or non-numerical or non-alphabetical designations could be used.

[0015] The first numbered row 68 and the first lettered row 70 are oppositely colored, from the second numbered row 72 and the second lettered row 74, say black and red, respectively, to distinguish mirror coordinates on the grid 20. In at least one example the particular square 64 in quadrant II has the coordinates "m11", where "m" is red and "11" is black. The mirror square 66 is in quadrant III and has the mirror coordinate "m11", where "m" is black and "11" is red.

[0016] In other examples, the same diagonally symmetric coordinate system is used, but the way that it is used is different. The first numbered row 68 and first lettered row 70 along the top and left side of the grid 20, respectively, are used as an upper coordinate system for quadrant I and quadrant II. A second numbered row 72 and second lettered row 74 along the bottom and right side of the grid 20, respectively, are used as a lower coordinate system for quadrant III and quadrant IV. The first numbered row 68 and first lettered row 70 provide mirror coordinates of the second numbered row 72 and second lettered row 74. That is, in at least one example the particular square 64 has the coordinates "c11", where both the "c" and "11" are black and the mirror square 66 has the mirror coordinates "c11", where both the "c" and "11" are red.

[0017] In one example, the coordinate number "8" 22 on the first numbered row 68 and second numbered row 72 are oppositely colored, say red and black, respectively, to

visually distinguish the central vertical axis 24. The coordinate letter "h" 23 on the first lettered row 70 and second lettered row 74 are likewise oppositely colored, say red and black, respectively, to visually distinguish the central horizontal axis 26.

[0018] In another example, the diagonally symmetrical geometric patterns and diagonally symmetric coordinate system facilitate solving or composing a crossword puzzle. A puzzle-solver/composer using the grid 20 must fill in the black squares to successfully complete the crossword puzzle. However, when the puzzle-solver/composer must fill in black squares and corresponding mirror black squares, the diagonally symmetrical geometric patterns and diagonally symmetric coordinate system of grid 20 provide visual guidance through the shapes, colors, and numbers used. This eliminates at least some of the confusion and complexity in locating mirror squares and thus facilitates solving or composing the puzzle. The puzzle-solver/composer may utilize one or both of the coordinate system or geometric patterns for guidance.

[0019] In one example, in the course of solving or composing a crossword puzzle the puzzle-solver/composer has determined that a black square must be filled in quadrant I at an upper coordinate "c3" 76, where both "c" and "3" are black. The puzzle-solver/composer determines that a diagonally symmetric mirror black square must be filled in quadrant IV. Using the lower coordinate system the puzzle-solver/composer locates the mirror square in quadrant IV at a lower coordinate "c3" 78, where both "c" and "3" are red,, to fill in black. It is to be understood that the diagonally symmetric coordinate system can also be used to locate letter squares for entering clue answers.

[0020] In another example, in the course of solving or composing a crossword puzzle the puzzle-solver/composer has determined that a square 80 must be filled in black. The square 80 is located on the left side of a gray cross 40 towards the top area of quadrant I. The puzzle-solver/composer notes the visual characteristics of the location of square 80, such

as the square 80 lying on the geometric pattern of a gray cross 40, the quadrant location being in quadrant I, and the geometric pattern being towards top of quadrant I. The puzzle-solver/composer determines that a diagonally symmetric mirror black square must be filled in so he looks for mirror visual characteristics. The mirror of quadrant I is quadrant IV and the mirror of a pattern towards the top of quadrant I is towards the bottom of quadrant IV. Using the mirror visual characteristics, the puzzle-solver/composer is guided in locating the right square 82 of the particular gray cross 84 to fill in black. The puzzle-solver/composer used the particular geometric pattern on which the square laid, the quadrant, and the approximate area within the quadrant as guidance to visually locate the mirror square. It is to be understood that the geometric patterns, colors, and quadrants can also be used to visually locate letter squares for clue answers.

[0021] In another example, the grid 20 has universal crossword utility as it may be used with externally supplied crossword clues. That is, the clues from a standard American crossword puzzle or foreign crossword puzzle, including non-English puzzles, are utilized with the grid 20 in lieu of a grid supplied with the standard American or foreign crossword puzzle. The size of the grid 20 that is used must be the same size as the grid that is supplied with the standard American or foreign crossword puzzle.

[0022] In another example, the grid 20 includes an erasable surface 86. The erasable surface can be written on using a marker, for example, and erased at the will of the puzzle-solver/composer using a cloth or other erasing device. This allows the puzzle-solver/composer to revise answers to clues, change the location of filled in black squares and the like. Also, the erasable surface 86 allows the grid 20 to be used repeatedly for different crossword puzzle games.

[0023] The erasable surface 86 also can be made magnetic through commonly known methods incorporated herein by reference. This allows a magnetic tile 88 to be

removably attached to the grid 20. The tile 88 includes a letter inscribed or printed on the surface and/or a black colored surface for use in entering a clue answer or black square. In other examples, a non-magnetic tile 88 is used with the grid 20.

[0024] In another example, the grid 20 is generated on an electronic screen. It is to be understood that the electronic screen includes but is not limited to a computer screen, handheld device screen, or other such screen. The puzzle-solver/composer utilizes an electronic input such as a keyboard, mouse or the like to enter letters or black squares into the grid 20.

[0025] In another example, the grid 20 is made large enough for at least two puzzle-solvers to see and/or write on for a crossword puzzle game. The at least two puzzle-solvers take timed turns entering clue answers and black squares. A scoring system tallies a score for each of the at least two puzzle-solvers according to the number of correct clue answers, the number of letters in the answer, and the number of black squares filled in. The puzzle-solver with the greatest score wins the game.

[0026] Although a preferred embodiment of this invention has been disclosed, a worker of ordinary skill in this art would recognize that certain modifications would come within the scope of this invention. For that reason, the following claims should be studied to determine the true scope and content of this invention.

CLAIMS

We claim:

1. A crossword puzzle grid comprising:

a grid comprising an array of squares, at least some of said squares being colored; and

a coordinate system along each side of said grid array designating square locations in said grid array.

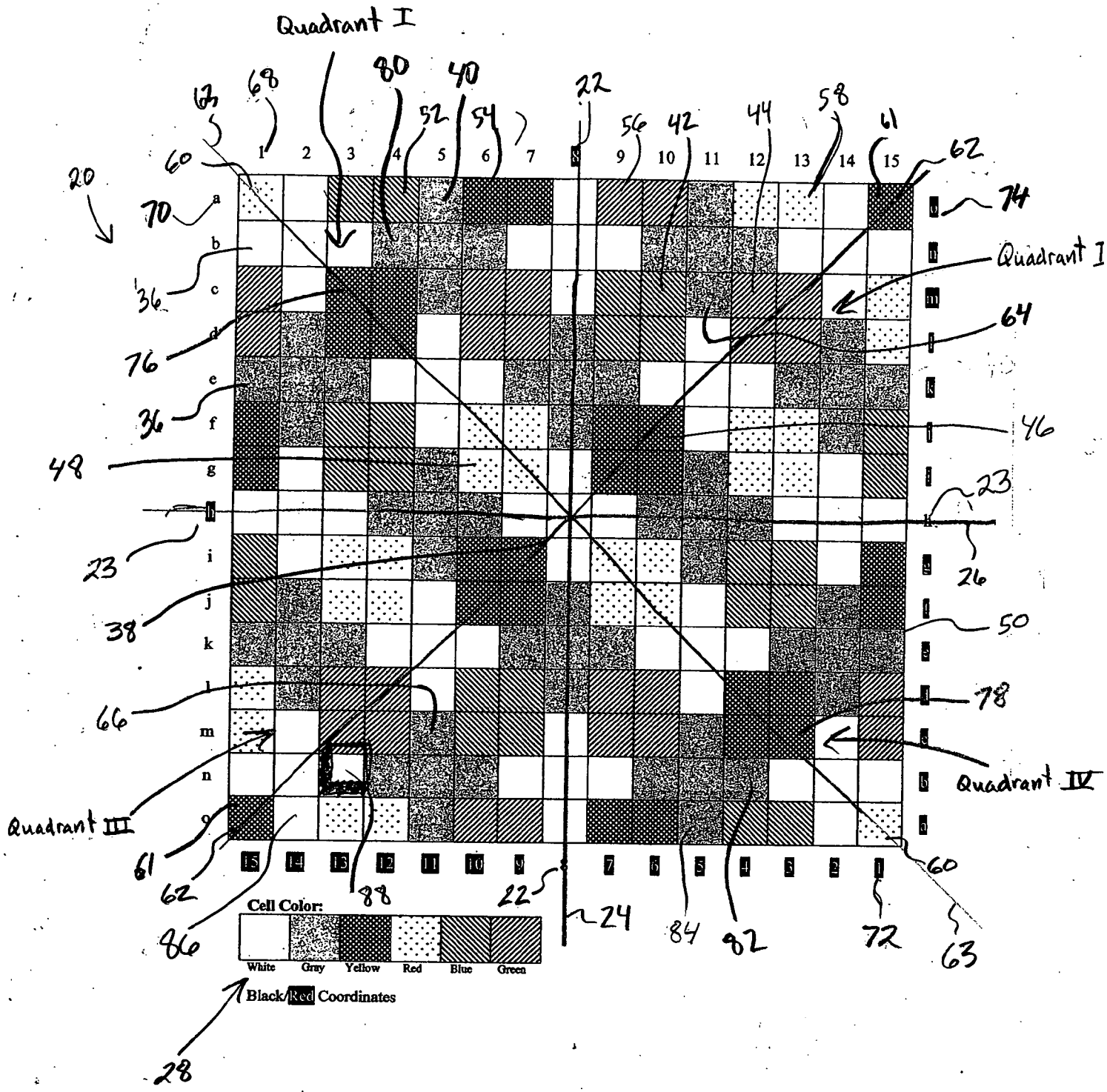

Fig. 1